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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,092	12/28/2001	Anne Marie Shields	11721-020	2218

7590 02/25/2004

BRINKS HOFER GILSON & LIONE  
P.O. Box 10395  
Chicago, IL 60610

EXAMINER
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ENGLISH, PETER C

ART UNIT	PAPER NUMBER
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3616

DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/034,092

**Applicant(s)**

SHIELDS ET AL.

**Examiner**

Peter C. English

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6, 9, 11 and 12 is/are allowed.
- 6) ☒ Claim(s) 7, 8, 10 and 13-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>04032002</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Preliminary Amendment*

1. The preliminary amendment filed on 18 July 2003 has been entered.

### *Oath/Declaration*

2. The declaration filed on 18 July 2003 is defective because it is not signed by the third inventor, Mark Shields. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

### *Drawings*

3. The drawings filed on 25 July 2003 are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 18, 28 and 30, shown in Fig. 1.
4. The drawings filed on 25 July 2003 are objected to because:  
In Fig. 5a, in box 126, "FUNCTION" should be "VALUE".  
In Fig. 5b, reference numbers 114, 126 are used to label arrows. This is inconsistent with Fig. 5a, in which these numbers label boxes. Note also that the specification associates these reference numbers with boxes (see paragraph 29, line 24; paragraph 34, line 4).
5. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Specification*

6. The disclosure is objected to because:  
Paragraph 1 inaccurately implies that applicant is claiming priority under 35 USC 119(e) to Provisional Application No. 60/156,165. Applicant should simply state which prior

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applications the instant application is “related to”, without using language such as “claims the benefit of”.

In paragraph 20, at line 4, “either of these structural elements” should be “this structural element”.

In paragraph 20, at line 6, “elements” should be “element”.

In paragraph 24, at line 4, “strip” should be “strips”.

In paragraph 25, at line 4, “strips” should be “strip”. Note that each strip 52 is a bend sensitive element 50 (see paragraph 23, lines 1-2).

In paragraph 27, at line 8, “26” should be “16”.

In paragraph 28, at line 6, “element 38” should be “portions”.

In paragraph 29, at line 15, “impactor” should be “impact”.

In paragraph 31, at line 12, “strip” should be “strips”.

Appropriate correction is required.

### ***Claim Objections***

7. Claims 1-10 are objected to because of the following informalities:

In claim 1, at line 13, “sensor signal sensor signal” should be “sensor signal”.

In claim 5, at line 3, “sensor” should be inserted before “elements”.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

8. Claims 7, 8, 10 and 13-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 7, at line 1, “The method...further comprising” is indefinite because the claim does not set forth additional, distinct method steps, but instead further defines one of the steps recited in claim 1. The examiner suggests: at line 1, change “further comprising:” to “wherein the step of determining a number of impact sensor signals comprises:”.

In claim 7, at line 4, “summing the sensor signal values...” is inaccurate because the sensor signal values are not summed. Instead, what is summed is the number of signal values exceeding the threshold. The examiner suggests: at line 4, insert “number of” before “sensor”.

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Claim 8 is indefinite because it recites a method step without defining the relationship between that step and the previously recited steps. The examiner suggests: at line 2, change “value.” to “value, before generating the actuating signal.”

In claim 10, at line 1, “the bend sensitive resistance element” is indefinite because more than one such element has been previously recited. The examiner suggests: at line 1, change “element is” to “elements are”.

In claims 13 and 17, at line 3, “the number of active elements” lacks proper antecedent basis. The examiner suggests: in claim 11, at line 11, insert “active” before “elements”.

In claim 19, at line 4, “summing the sensor signal values...” is inaccurate because the sensor signal values are not summed. Instead, what is summed is the number of signal values exceeding the threshold. The examiner suggests: at line 4, insert “number of” before “sensor”.

Claim 19 is indefinite because it recites a method step without defining the relationship between that step and the previously recited steps. The examiner suggests: at line 5, change “value.” to “value to determine the number of active elements.”

Claim 20 is indefinite because it recites a method step without defining the relationship between that step and the previously recited steps. The examiner suggests: at line 2, change “value.” to “value, before generating the actuating signal.”

In claim 21, at lines 6-7, “the sensor signal having a...value defining an aggregate sensor signal value” is indefinite because a single sensor signal having a single value cannot define an “aggregate” value. At least two sensor signal values are necessary in order to have an “aggregate” value. Further, if a single value defines the “aggregate” value, then it is unclear what the difference is between the step recited at lines 8-9 of claim 21 and the step recited at lines 10-12 of this claim.

In claim 21, at lines 10-11, “the threshold aggregate sensor signal value” lacks proper antecedent basis. The examiner suggests: at line 10, change “than the” to “than a”.

In claim 22, at lines 2-3, “a filtered signal having the...value defining the aggregate sensor signal value” is indefinite for the same reason given above with respect to claim 21, lines 6-7.

In claim 26, at line 1, “each element” is indefinite because claim 21 recites only one element (see claim 21, line 3).

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In claim 27, at line 1, "the bend sensitive resistance element" is indefinite because more than one such element has been previously recited in claim 26. However, as explained above, the plural elements in claim 26 are inconsistent with the single element in claim 21.

In claim 28, at lines 4-5, "the sensor signal having a...value...defining an aggregate sensor signal value" is indefinite because a single sensor signal having a single value cannot define an "aggregate" value. At least two sensor signal values are necessary in order to have an "aggregate" value. Further, if a single value defines the "aggregate" value, then it is unclear what the difference is between the determining function recited at lines 8-9 of claim 28 and the determining function recited at lines 9-10 of this claim.

In claim 28, at line 8, "being capable of..." renders the claim indefinite because it is unclear whether the limitation that follows this phrase is part of the claimed invention. The examiner suggests: at line 8, delete "being capable of".

In claim 28, at line 10, "the threshold aggregate sensor signal value" lacks proper antecedent basis. The examiner suggests: at line 10, change "than the" to "than a".

### ***Allowable Subject Matter***

9. Claims 1-6, 9, 11 and 12 are allowed.

10. Claims 7, 8, 10 and 13-28 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

11. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fails to teach an air bag control system which determines whether impact sensor signal values are greater than an active sensor element threshold value, determines an aggregate sensor signal value by summing the impact sensor signal values, determines whether the aggregate sensor signal value is greater than an aggregate threshold value, and actuates an air bag when the aggregate sensor signal value is greater than the aggregate threshold value.

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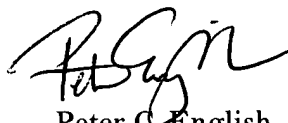
***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Buchheim et al., Breed and DE 19957187 teach air bag control systems with impact sensors.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter C. English whose telephone number is 703-308-1377. The examiner can normally be reached on Monday through Thursday (7:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 703-308-2089. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Peter C. English 2/23/04  
Primary Examiner  
Art Unit 3616

pe  
23 February 2004